



OPERATING PERMIT (Conditional Major) Issued Pursuant to Tennessee Air Quality Act

Date Issued:

Permit Number:

456681

Date Expires: August 1, 2009

Issued To:

Cytec Industries Inc.

Installation Address:

7910 Mt. Joy Road
Mt. Pleasant

Installation Description:

01: SO₂ Abatement System
03: Boilers
10: Chemical Storage Tanks
18: Storage Tanks
22: Polymer Manufacturing Plant
23: Storage Tanks (Polymer)
24: Polymer Packaging Plant
26: T-820 Storage Tank

Emission Source Reference No.

60-0041
27: PT Packaging
28: Biocide Manufacturing
29: Manufacture of P-50 Oxime Blended Product
35: Two Waste and Storm Water Holding Tanks
36: Waste Water Treatment System Storage Tanks
37: Maleic Anhydride Tank

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

GENERAL CONDITION:

1. The materials that were utilized in the preparation of this permit are previous Permit No. 450651 and the application dated October 17, 2000 and signed by Robert W. Porter, Site Manager of the permitted facility. Pursuant to the notification letter dated April 26, 2004, Mr. William J. Smith, Plant Manager is now the responsible person to represent and bind the facility in environmental permitting affairs. If this person terminates his employment or is reassigned different duties such that he is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(continued on the next page)

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON TRANSFERABLE

POST AT INSTALLATION ADDRESS

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| SECTION I: The following conditions shall apply to all sections of this permit unless otherwise noted. |
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2. The permittee has elected to opt-out of being issued a major source operating permit pursuant to Rule 1200-3-9-.02(11)(a) of the Tennessee Air Pollution Control Regulations (TAPCR). The permittee would be considered a major source because, at the time of application, their “potential to emit” for:
- each criteria pollutant (particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds) was greater than 100 tons per year,
 - a single hazardous air pollutant (HAP) was greater than 10 tons per year, and
 - a combination of hazardous air pollutants (HAPs) was greater than 25 tons per year.

The permittee has agreed to be subject to limitations in order to be below the major source applicability thresholds of 100 tons per year for each criteria pollutant, 10 tons per year for a single HAP, and 25 tons per year for a combination of HAPs.

3. Any non-compliance with any condition(s) of this permit set to restrain the “potential to emit” below the applicability threshold(s) of TAPCR 1200-3-9-.02(11) shall be reported in writing to the Technical Secretary within three (3) working days of such discovery. This notification, at a minimum, shall include the identification of the source, identification of the permit condition(s) violated, and details of the violation.
4. The permittee is placed on notice that conditions of this operating permit contain limitations that allow the permittee to opt-out of the major source operating permit program requirements specified in TAPCR 1200-3-9-.02(11). Failure to abide by these limits will not only subject the permittee to enforcement action by the state of Tennessee, but it may also result in the imposition of Federal enforcement action by the United States Environmental Protection Agency and the loss of being Federally recognized as a conditional major source.
5. Emissions of particulate matter, sulfur dioxide, volatile organic compounds, nitrogen oxides, or carbon monoxide from this facility shall not exceed 95.0 tons each during all intervals of twelve (12) consecutive months.
- These emission limitations are established pursuant to TAPCR 1200-3-9-.02(11) and the agreement letter dated October 22, 1998 from the permittee.
6. Emissions of any hazardous air pollutant (HAP) listed in Section 112 of the Federal Clean Air Act shall not exceed 9.5 tons during all intervals of twelve (12) consecutive months. Emissions of any combination of HAPs shall not exceed 24 tons during all intervals of twelve (12) consecutive months.
- These emission limitations are established pursuant to TAPCR 1200-3-9-.02(11) and the agreement letter dated October 22, 1998 from the permittee.
7. A written report stating the compliance status of this facility with **Conditions 5 and 6** shall be submitted by March 31 of every year starting in 2005. This report shall cover the preceding calendar year, and shall include the records required by **Conditions 14-1, 14-11, 14-12, 15-4, 17-1, 18-4, 19-2, 21-6, 21-7, 24-2, 24-4, 24-5, 26-3, 28-3, 29-3, and 30-3**. This report shall be mailed to the following address:

Tennessee Division of Air Pollution Control
Columbia Environmental Assistance Center
2484 Park Plus Drive
Columbia, TN 38401

8. A record of purchase orders and invoices for all VOC and HAP containing materials must be maintained and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than five (5) years.
9. Visible emissions from sources at this facility, unless otherwise noted in this permit, shall not exceed twenty (20) percent opacity except for one six minute period per one (1) hour or more than twenty-four (24) minutes in any twenty-four (24) hour period. Visible emissions shall be determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6 minute average).

TAPCR 1200-3-5-.03(6) and TAPCR 1200-3-5-.01(1)

10. Should proof of compliance for the pollutants with emission limitations in this permit be required, the emissions measuring test methods and procedures are the following:

| Pollutant or Parameter | Testing Methodology * |
|---|-----------------------|
| Particulate Matter | EPA Method 5 |
| Sulfur Dioxide | EPA Method 6 |
| Nitrogen Oxides | EPA Method 7 |
| Carbon Monoxide | EPA Method 10 |
| Volatile Organic Compounds | EPA Method 25 |
| Volatile Organic Compounds from Equipment Leaks | EPA Method 21 |

* as published in the current 40 CFR 60, Appendix A

11. Excess emissions shall be addressed as specified in Chapter 1200-3-20 of the Tennessee Air Pollution Control Regulations.
12. The permittee shall apply for renewal of this permit not less than 60 days prior to the permit's expiration date in accordance with TAPCR 1200-3-9-.02(3).
13. This permit supersedes any previous permits for these sources.

SECTION II: SOURCE SPECIFIC CONDITIONS

60-0041-01: SO₂ Abatement System. Thermal oxidizer, quencher, 2-stage SO₂ absorber in series.

All sources controlled by the SO₂ abatement system are as listed:

| Source | Processes associated with the SO ₂ abatement system (11A) |
|-------------|--|
| NI Unit | NI-1, NI-2, NI-3, NI-4, NI-5, NI-6, NI-7, and NI-8 |
| PT Unit | PT, PT2 |
| 6 Bank Unit | AS-1 (air stripper) 6 Bank-1 (Product 1) 6 Bank-2A (Product 2) |

- 14-1. Sulfur dioxide emissions from this system's scrubber stack shall not exceed one thousand (1,000) parts per million, 0.10 percent by volume, dry basis utilizing a one-hour averaging interval and shall be less than 40.0 tons per year. Calculations demonstrating compliance with the less-than-40-tons-per-year SO₂ limitation shall be included as the part of the annual report required by **Condition 7**.

The primary scrubber liquor circulation rate shall be recorded every two hours and shall not be less than 200 gallons per minute on a daily average basis. The pH of the primary scrubber liquor shall be a minimum of 6 over a three-hour averaging period when the PT process is operational. The pH of the primary scrubber liquor shall be monitored and recorded continuously. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.

- 14-2. All planned startups and shutdowns shall be reported to the Division in accordance with Chapter 1200-3-20 of Tennessee Air Pollution Control Regulations.
- 14-3. All bypass stack operations, unplanned shutdowns, and sulfur dioxide emissions in excess of 1,000 parts per million (utilizing a one-hour averaging interval) shall be reported to the Division in accordance with Chapter 1200-3-20 of Tennessee Air Pollution Control Regulations.
- 14-4. The Technical Secretary reserves the right to have an observer present during startups, shutdowns and bypass stack operations and to perform routine inspections of all air contaminant control equipment and all associated instrumentation.

(conditions continued on next page)

- 14-5. There must be no ambient air standard violations due to process startups or emergency bypass operations. Such startups and bypass operations shall remain within the procedures specified below:

Procedures for Startup or Emergency Shutdown Involving the Use of Bypass Stack from the NI Thermal Oxidizer

- A. Start up of a process unit.
1. The thermal oxidizer is slowly warmed up with auxiliary fuel while the bypass stack is open.
 2. The SO₂ scrubber is started up.
 3. The bypass is closed.
 4. The process units are started up.
- B. Thermal oxidizer flame out and the stack cap opens.
1. Shut down all processes within 30 minutes if the thermal oxidizer flame cannot be restored to operation.
- C. Bypass stack opens because of high temperature, high pressure, etc. (thermal oxidizer is operational). If the situation cannot be safely corrected within 15 minutes, then the following shutdown procedure will be followed:
1. Shut down 6 Bank immediately.
 2. Shut down the PT reactor feed immediately.
- D. SO₂ scrubber failure (thermal oxidizer is operational). If scrubber operation cannot be safely restored within 15 minutes, then the following shutdown procedure will be followed:
1. Shut down 6 Bank immediately.
 2. Shut down the PT reactor feed immediately
- 14-6. Operation of the incinerator and associated scrubber system equipment shall be maintained in a manner considered as commensurate with the use of reasonable and proper control technology for the control of gaseous emissions.
- 14-7. This permit shall be valid for the production of compounds not specifically listed in the source description provided the following conditions are met:
- a) The production of the compound does not result in:
 - the release of emissions in excess of those listed in the applications of record.
 - increased emissions of any pollutant over those associated with normal permitted operation.
 - the physical modification of process equipment.
 - any new emission release points.
 - b) Twenty days prior to production of any new compounds at this facility, a notification shall be submitted to the Technical Secretary. This notification shall specify the new compound to be produced and the emissions to be released.
 - c) The Technical Secretary reviews the information submitted in b) and agrees that a) will be met.
- 14-8. Particulate matter emitted from the processes controlled by the SO₂ abatement system shall not exceed 1.6 pounds per hour. This emission limitation is established pursuant to TAPCR 1200-3-9-.02(11) and the agreement letter dated January 4, 2000 from the permittee.
- 14-9. Volatile organic compounds (VOC) emitted from this source shall not exceed 27.0 tons during all intervals of twelve (12) consecutive months.
TAPCR 1200-3-7-.07(2)
- 14-10. Hazardous air pollutants (HAPs) emitted from this source shall not exceed 5.02 tons during all intervals of twelve (12) consecutive months.
TAPCR 1200-3-7-.07(2)

(conditions continued on next page)

- 14-11. Compliance with **Conditions 14-9 and 14-10** shall be demonstrated by proper operation of the thermal oxidizer. Recording pyrometers shall be maintained on the off-gas incinerator to provide a record of operation temperature. The outlet temperature of the incinerator shall be a minimum of 1,650°F over a three-hour averaging period to assure 99% efficiency. This temperature shall be monitored and continuously recorded.
- 14-12. A report of the names and amounts of all products produced which are associated with this source, the period of production, and the VOC and HAP emissions for the previous calendar year shall be submitted to the Technical Secretary in accordance with **Condition 7**.

| Month | Product | Number of batches per month | VOC emissions (lb/batch) | HAP _i * emissions (lb/batch) | Control efficiency (as per 14-11) | VOC emissions (lb/month) | HAP _i * emissions (lb/month) | VOC emissions (tons/12 consecutive months) | HAP _i * emissions (tons/12 consecutive months) |
|-------|---------|-----------------------------|--------------------------|---|-----------------------------------|--------------------------|---|--|---|
| | | | | | 99% | | | | |
| | | | | | 99% | | | | |
| | | | | | 99% | | | | |

* Columns repeated for all HAPs

PT Process: PT-2. Baghouse control. Exhausts to the atmosphere.

- 15-1. The maximum material input shall not exceed the amount given in the confidential application dated September 10, 1999.
- 15-2. Particulate matter emitted from this process shall not exceed 0.02 grains per dry standard cubic foot and 0.26 pounds per hour.
TAPCR 1200-3-7-.04(1)
- 15-3. The baghouse shall be operational whenever the process is in operation.
- 15-4. Compliance with **Condition 15-2** shall be assured by monitoring and recording the pressure drop daily across the baghouse. The pressure drop shall be a minimum of 1.5 inches of water to assure 99.75 % efficiency. These records shall be maintained at the source location for a period of not less than five (5) years.

Hot Oil System for PT Unit

- 16-1. Heat input to this fuel burning unit shall not exceed 3 MMBtu/hr.
- 16-2. Pollutants emitted from this fuel burning unit shall not exceed the following limits:

| Pollutant | Emissions (lb/hr) |
|----------------------------|-------------------|
| Particulate Matter | 0.2 |
| Sulfur Dioxide | 0.2 |
| Carbon Monoxide | 0.2 |
| Volatile Organic Compounds | 0.2 |
| Nitrogen Oxides | 0.4 |

These emission limitations are established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 16-3. Only natural gas shall be used as fuel for this fuel burning unit.
- 16-4. Compliance with **Condition 16-2** is based on AP-42, 5th Edition emission factors Tables 1.4-1 and 1.4-2 for natural gas combustion.

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| All 6 Bank Product 1 |
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17-1. Equipment Leaks of Benzene

1. This source shall have all valves within a process unit comply with an allowable percentage of valves leaking of equal to or less than 2.0 percent.

Emissions from this source are to be recorded as follows:

| Month | Emissions detected (lbs) |
|-------|--------------------------|
| | |

2. A performance test shall be conducted initially upon designation, annually, and at other times requested by the Technical Secretary.
3. An owner or operator of any piece of equipment to which this rule applies shall submit a statement in writing notifying the Technical Secretary that the requirements of TAPCR 1200-3-11-.06(3), (6), (7), and (8) are being implemented.
 - a) The statement is to contain the following information for each source:
 - (i) Equipment identification number and process unit identification.
 - (ii) Type of equipment (e.g., a pump or pipeline valve).
 - (iii) Percent by weight VHAP in the fluid at the equipment.
 - (iv) Process fluid state at the equipment (gas/vapor or liquid).
 - (v) Method of compliance with the standard (e.g., “monthly leak detection and repair” or “equipped with dual mechanical seals”).
4. A report shall be submitted to the Technical Secretary semiannually, that includes the following information:
 - a) Process unit identification.
 - b) For each month during the semiannual reporting period.
 - (i) Number of valves for which leaks were detected.
 - (ii) Number of valves for which leaks were not repaired.
 - (iii) Number of pumps for which leaks were detected.
 - (iv) Number of pumps for which leaks were not repaired.
 - (v) Number of compressors for which leaks were detected.
 - (vi) Number of compressors for which leaks were not repaired.
 - (vii) The facts that explain any delay of repairs and, where appropriate, why a process unit shutdown was technically infeasible.

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| 6 Bank Product 2. Isoprene Flare for Control. Vents to atmosphere. |
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- 18-1. The maximum material input rate shall not exceed the amount given in the confidential application dated September 10, 1999.
- 18-2. Volatile organic compounds (VOC) emitted from this process shall not exceed 6.0 tons during all intervals of twelve (12) consecutive months.
TAPCR 1200-3-7-.07(2)
- 18-3. This process shall not operate unless the flare is operational or the emissions are routed to the SO₂ abatement system thermal oxidizer. An overall VOC control efficiency of 99% shall be utilized as per the application dated September 10, 1999.

(conditions continued on next page)

- 18-4. Compliance with **Conditions 18-1, 18-2, and 18-3** shall be demonstrated by keeping a record of VOC emissions when the flare is venting to the atmosphere. This record shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than five (5) years.

| Month | Hours flare vented to atmosphere | Total material output (lb/month) | VOC content (lbs emitted per lb product produced) | Control efficiency (as per 18-3) | VOC emissions (lb/month) | VOC emissions (tons/12 consecutive months) |
|-------|----------------------------------|----------------------------------|--|----------------------------------|--------------------------|--|
| | | | | 99% | | |
| | | | | 99% | | |
| | | | | 99% | | |

6 Bank Product 2. Steam Jets J-900 and J-902 vent to atmosphere.

- 19-1. Volatile organic compounds (VOC) emitted from this process shall not exceed 5.0 tons during all intervals of twelve (12) consecutive months.

TAPCR 1200-3-7-.07(2)

- 19-2. Compliance with **Condition 19-1** shall be demonstrated by keeping the following record of VOC emissions. This record shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than five (5) years.

| Month | Amount of Product 2 produced | VOC emission factor for jets * | VOC emissions (lb/month) | VOC emissions (tons/12 consecutive months) |
|-------|------------------------------|--------------------------------|--------------------------|--|
| | | 6.73 | | |
| | | 6.73 | | |
| | | 6.73 | | |

* Units are in pounds of VOC per 1,000 pounds of Product 2. Emission factor provided by company in November 10, 2000 letter as required by previous permit 450651.

Hot Oil Heaters for 6 Bank

- 20-1. The total heat input rate for this fuel burning unit shall not exceed 12.9 MMBtu per hour.
- 20-2. Pollutants emitted from this fuel burning unit shall not exceed the following limits:

| Pollutant | Emissions (lb/hr) |
|----------------------------|-------------------|
| Particulate Matter | 0.2 |
| Sulfur Dioxide | 0.2 |
| Carbon Monoxide | 1.0 |
| Volatile Organic Compounds | 0.2 |
| Nitrogen Oxides | 2.5 |

These emission limitations are established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 20-3. Only natural gas shall be used as fuel for this fuel burning unit.
- 20-4. Compliance with **Condition 20-2** is based on AP-42, 5th Edition emission factors, Tables 1.4-1 and 1.4-2 for natural gas combustion.

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| 60-0041-03 | Boilers #3, #4, and #5 using No. 2 fuel oil and natural gas. |
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- 21-1. The total heat input rate for boilers #3, #4 and #5 combined shall not exceed 69.7 MMBtu/hr nor 549,514.8 MMBtu during all intervals of twelve (12) consecutive months.

This limitation is established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 21-2. The total No. 2 fuel oil usage for boilers #3, #4 and #5 combined shall not exceed 400,000 gallons during all intervals of twelve (12) consecutive months.

This limitation is established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 21-3. Only No. 2 fuel oil and natural gas shall be used as fuel for the boilers.

- 21-4. The sulfur content of the No. 2 fuel oil shall not exceed 0.5 percent by weight. Compliance shall be demonstrated by providing an analysis of the fuel oil sulfur content (information provided by the vendor is acceptable).

This limitation is established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 21-5. The pollutant emission rates from this source shall not exceed the following limits:

| Pollutant | Emission limit (lb/hr) | Emission limit (tons/12 consecutive months) |
|-----------------|---------------------------|---|
| TSP | 1.5 | 5.91 |
| SO ₂ | 37.0 | 14.5 |
| CO | 3.0 | 11.83 |
| NO _x | 10.0 | 39.42 |
| VOC | 0.4 | 1.58 |

These emission limitations are established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated December 1, 1993.

- 21-6. Compliance with the hourly emission limits of **Condition 21-5** shall be assured by operation of only boiler #5 or boilers #3 and/or #4 at any one time, except that boilers #3 and/or #4 may be operated during periods of start-up and shutdown of boiler #5. Certification of compliance with this requirement shall be submitted as part of the report required by **Condition 7**.

Compliance with the annual emission limits of **Condition 21-5** shall be assured by compliance with **Conditions 21-1, 21-2, 21-3, and 21-4** utilizing emission factors from AP-42, 5th Edition, Tables 1.3, 1.4-1, and 1.4-2.

- 21-7. Compliance with **Conditions 21-1, 21-2, and 21-3** shall be demonstrated by keeping a record of fuel usage (No. 2 fuel oil and natural gas) and total heat input. This record shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than five (5) years.

| Month | No. 2 fuel oil usage (gallons/month) | No. 2 fuel oil usage (gallons/12 consecutive months) | Natural gas usage (cuft/month) | Natural gas usage (cuft/12 consecutive months) | Total heat input (MMBtu/12 consecutive months) |
|-------|---|--|-----------------------------------|--|--|
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|-------------------|------------------------|
| 60-0041-10 | Chemical Storage Tanks |
|-------------------|------------------------|

- 22-1. Volatile organic compounds (VOC) emitted from this source shall not exceed 1.0 ton during all intervals of twelve (12) consecutive months. Compliance with this condition is based on EPA's TANKS 3 program utilizing worst-case conditions.

1200-3-7-.07(2)

- 22-2. This permit is valid for the storage tanks listed below:

| <u>Tank I.D.</u> | <u>Tank Capacity</u> |
|------------------|----------------------|
| T-325A | 10,000 gallons |
| T-325B | 19,000 gallons |
| T-326 | 19,000 gallons |
| T-800 | 19,000 gallons |
| T-807 | 13,000 gallons |
| T-935 | 10,900 gallons |
| T-936 | 7,500 gallons |
| T-121 | 8,200 gallons |

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|-------------------|---------------|
| 60-0041-18 | Storage Tanks |
|-------------------|---------------|

- 23-1. This permit is valid for the storage tanks listed below:

| <u>Tank I.D.</u> | <u>Tank Capacity</u> |
|------------------|----------------------|
| T-601 | 8,000 gallons |
| T-603 | 4,000 gallons |
| T-961 | 10,000 gallons |

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| 60-0041-22 | Polymer Manufacturing Plant. Catalytic incinerator control and baghouse control. |
|-------------------|--|

- 24-1. The input capacity of this source shall not exceed the amount given in the confidential application dated November 16, 1999.
- 24-2. Particulate matter emitted from this source shall not exceed 2.61 pounds per hour. Compliance with this condition shall be assured by monitoring and recording the pressure drop daily across the baghouse. The pressure drop shall be a minimum of 2.8 inches of water to assure 98.75% efficiency, as per the letter dated November 10, 2000 from the permittee. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.

TAPCR 1200-3-7-.03

- 24-3. Volatile organic compounds (VOC) emitted from this source shall not exceed 11.4 tons during all intervals of twelve (12) consecutive months and 84.0 lbs per batch. Compliance with this requirement shall be assured by **Condition 24-4 and 24-5**.

TAPCR 1200-3-7-.07(2)

- 24-4. Compliance with **Condition 24-3** shall be demonstrated by proper operation of the thermal oxidizer. Recording pyrometers shall be maintained on the off-gas incinerator to provide a record of temperatures across the catalyst bed. The inlet catalyst temperature shall be a minimum of 650°F utilizing a three-hour averaging period to assure 99% efficiency. The outlet catalyst temperature shall be a minimum of 700°F utilizing a three-hour averaging period to assure 99% efficiency. These temperatures shall be monitored and continuously recorded. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.

- 24-5. A log of the input materials in batches processed each month and VOC/HAP emissions from each batch must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than five (5) years.

| Month | Product | Number of batches per month | VOC emissions (lb/batch) | HAP _i * emissions (lb/batch) | Thermal oxidizer control efficiency (as per 24-4) | VOC emissions (lb/month) | HAP _i * emissions (lb/month) | VOC emissions (tons/12 consecutive months) | HAP _i * emissions (tons/12 consecutive months) |
|-------|---------|-----------------------------|--------------------------|---|---|--------------------------|---|--|---|
| | | | | | 99% | | | | |
| | | | | | 99% | | | | |
| | | | | | 99% | | | | |

* Columns repeated for all HAPs

- 24-6. This permit is valid for the production of polymer compounds not specifically listed in the source description provided the following conditions are met:
- The production of the compound does not result in:
 - the release of emissions in excess of those listed in the applications of record.
 - increased emissions of any pollutant over those associated with normal permitted operation.
 - the physical modification of process equipment.
 - any new emission release points.
 - Twenty days prior to production of any new polymer compounds at this facility, a notification shall be submitted to the Technical Secretary. This notification shall specify the new compound to be produced and the emissions to be released.
 - The Technical Secretary reviews the information submitted in b) and agrees that a) will be met.

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| 60-0041-23 | 5 Storage Tanks (Polymer). NSPS. |
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- 25-1. This permit is valid for the storage tanks listed below:

| <u>Tank I.D.</u> | <u>Tank Capacity</u> |
|------------------|-----------------------|
| T-5101 | 25,000 gallons (NSPS) |
| T-5102 | 10,000 gallons |
| T-5103 | 10,000 gallons |
| T-5104 | 10,000 gallons |
| T-5105 | 10,000 gallons |

- 25-2. Storage tank T-5101 is subject to the recordkeeping requirements of TAPCR 1200-3-16-.61(7) for volatile organic liquid storage vessels.
- 25-3. The control device for storage tank T-5104 shall be operational and the remaining four storage tanks shall be enclosed whenever this source is in operation.
- 25-4. Volatile organic compounds (VOC) emitted from this source shall not exceed 1.0 ton during all intervals of twelve (12) consecutive months. Compliance with this condition is based on EPA's TANKS 3 program utilizing maximum usage conditions at the source.
- TAPCR 1200-3-7-.07(2)

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|-------------------|---|
| 60-0041-24 | Polymer Packaging Plant. Storage and packaging facilities. Baghouse dust collection system. |
|-------------------|---|

- 26-1. The maximum process input rate shall not exceed 60,000 pounds per hour. The Technical Secretary may require the permittee to prove compliance with this limitation. A construction permit must be obtained before exceeding this capacity.

(conditions continued on next page)

- 26-2. Particulate matter emitted from this source shall not exceed 1.0 pound per hour.

This emission limitation is established pursuant to TAPCR 1200-3-26-.02(6)(b) and the information contained in the mutual agreement letter dated July 30, 1993.

- 26-3. Compliance with **Condition 26-2** shall be assured by monitoring and recording the pressure drop across the baghouse on a daily basis. The pressure drop shall be a minimum of 0.75 inches of water to assure 99.75% efficiency, as per the letter dated November 10, 2000 from the permittee. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.

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|-------------------|---------------------------|
| 60-0041-26 | Storage Tank T-820. NSPS. |
|-------------------|---------------------------|

- 27-1. The permit is valid for the storage tank listed below:

| | |
|------------------|----------------------|
| <u>Tank I.D.</u> | <u>Tank Capacity</u> |
| T-820 | 20,000 gallons |

- 27-2. Storage tank T-820 is subject to the recordkeeping requirements of TAPCR 1200-3-16-.61(7) for volatile organic liquid storage vessels.
- 27-3. Volatile organic compounds (VOC) emitted from this source shall not exceed 0.1 tons during all intervals of twelve (12) consecutive months. Compliance with this condition is based on EPA's TANKS 3 program utilizing maximum usage conditions at the source.
- TAPCR 1200-3-7-.07(2)

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|-------------------|----------------------------------|
| 60-0041-27 | PT Packaging . Baghouse control. |
|-------------------|----------------------------------|

- 28-1. The maximum material input rate to this source shall not exceed 5,700 pounds per hour on a daily average basis. The Technical Secretary may require the permittee to prove compliance with this limitation. A construction permit must be obtained before exceeding this rate.
- 28-2. Particulate matter emitted from PKG-1 shall not exceed 0.12 pound per hour. Compliance with this requirement shall be assured by **Condition 28-3**.
- This emission limitation is established pursuant to TAPCR 1200-3-7-.01(5) and the information contained in the mutual agreement letter dated April 8, 1991.
- 28-3. The baghouse shall be operational whenever the source is in operation. Compliance with the particulate matter emission limit shall be assured by maintaining a minimum pressure drop of 2 inches of water across the baghouse. Pressure drop shall be monitored and recorded every day to assure 99.75% efficiency. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.
- 28-4. Visible emissions from this source shall not exceed ten (10) percent opacity as determined by EPA Method 9, as published in the current 40 CFR 60, Appendix A (6 minute average).
- This limitation is established pursuant to TAPCR 1200-3-7-.01(5) and the information contained in the mutual agreement letter dated April 8, 1991.

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| 60-0041-28 | Biocide Manufacturing. Packed bed scrubber for controlling HCl. |
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- 29-1. The maximum material input rate for this source shall not exceed 883 pounds per hour (lb/hr), excluding water, on a weekly batch-time weighted average.

(conditions continued on next page)

- 29-2. Hydrochloric acid (HCl) emitted from this source shall not exceed 1.0 pound per hour.
TAPCR 1200-3-7-.07(2)
- 29-3. A record showing calculations of HCl emissions on a twelve (12) consecutive month basis shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than five (5) years.
- 29-4. The exhaust gases from this source shall be discharged unobstructed vertically upwards to the ambient air from a stack with an exit diameter of 9.0 inches not less than 50 feet above ground level.
- 29-5. The caustic scrubber shall be operational any time this process is in operation. In the event that the scrubber malfunctions or fails to operate, this source shall not be operated.

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| 60-0041-29 | Manufacture of P-50 Oxime Blended Product. Eleven associated storage tanks, four reactor/process tanks. Exhaust filters, vapor recovery as control. |
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- 30-1. The process material input rate shall not exceed the amount given in the confidential application dated September 10, 1999. The Technical Secretary may require the permittee to prove compliance with this rate. A construction permit must be obtained before exceeding this rate.
- 30-2. Volatile organic compounds (VOC) emitted from this source shall not exceed 4.5 pounds per hour.
This emission limitation is established pursuant to TAPCR 1200-3-9-.02(11) and the information contained in the mutual agreement letter dated December 28, 1999.
- 30-3. Compliance with **Condition 30-2** shall be assured by keeping a daily record of material input and VOC content. The coolant temperature for the condensers shall be monitored and recorded once daily to assure the efficiency of the condensers and hourly VOC emissions. These records shall be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. These records must be retained for a period of not less than five (5) years.

| Month | Number of batches per month | Material input (lbs/batch) | Total material input (lbs/month) | VOC content (wt %) | Control efficiency * | VOC emissions (lbs/month) | VOC emissions (tons/12 consecutive months) | HAPs emissions (tons/12 consecutive months) |
|-------|-----------------------------|----------------------------|----------------------------------|--------------------|----------------------|---------------------------|--|---|
| | | | | | 99.4% | | | |
| | | | | | 99.4% | | | |
| | | | | | 99.4% | | | |

* Maximum temperature at which the condensers can operate and still maintain compliance with **Condition 30-2**: for condensers X-4201 and X-4557B, max. temp. = -16°C, for condenser X-4216, max. temp. = -17°C. The averaging time for each condenser is 3 hours. (per letter dated November 10, 2000 from the permittee)

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| 60-0041-35 | Two Waste and Storm Water Holding Tanks. Venturi scrubber and mist eliminator as control. |
|-------------------|---|

- 31-1. The stated design capacity of this source is 2,000,100 pounds per hour of waste water and storm water input. A construction permit must be obtained before exceeding this capacity. The Technical Secretary may require the permittee to prove compliance with this rate.
- 31-2. Volatile organic compounds (VOC) emitted from this source shall not exceed 2.1 tons during all intervals of twelve (12) consecutive months.
TAPCR 1200-3-7-.07(2)
- 31-3. The venturi scrubber shall be operational when the source is in operation.

(conditions continued on next page)

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| 60-0041-36 | Waste Water Treatment System Storage Tanks. NSPS as indicated. |
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- 32-1. The permittee shall maintain records of tank identification, capacity, and an estimate of projected throughput for the following uncontrolled tanks:

| <u>Tank I.D.</u> | <u>Tank Capacity</u> |
|------------------|----------------------|
| R-7800 | 10,300 gallons |
| R-7801 | 10,300 gallons |
| R-7802 | 10,500 gallons |
| R-7803 | 9,900 gallons |
| T-7800 (NSPS) | 21,100 gallons |
| T-7804 (NSPS) | 11,844 gallons |
| T-7802 | 15,000 gallons |
| T-7803 | 15,000 gallons |
| T-4566 (NSPS) | 15,000 gallons |

- 32-2. Storage tanks T-7800, T-7804, and T-4566 are subject to the recordkeeping requirements of TAPCR 1200-3-16-.61(7) for volatile organic liquid storage vessels.
- 32-3. Toluene emitted from this source shall not exceed 0.45 pounds per year. This value is the worst case emissions from the tanks, estimated by EPA's TANKS 3 program.
TAPCR 1200-3-7-.07(2)
- 32-4. Methyl alcohol emitted from this source shall not exceed 4.93 pounds per year. This value is the worst case emissions from the tanks, estimated by EPA's TANKS 3 program.
TAPCR 1200-3-7-.07(2)

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| 60-0041-37 | Maleic Anhydride Tank. NSPS |
|-------------------|-----------------------------|

- 33-1. This permit is valid for the tank listed below:

| <u>Tank I.D.</u> | <u>Type</u> |
|------------------|-------------|
| T-1113 | Storage |

- 33-2. Storage tank T-1113 is subject to the recordkeeping requirements of TAPCR 1200-3-16-.61(7) for volatile organic liquid storage vessels.
- 33-3. Volatile organic compounds (maleic anhydride, a HAP) emitted from this source shall not exceed 1.0 ton during all intervals of twelve (12) consecutive months. This value is the worst case emissions from the tank, estimated by EPA's TANKS 3 program.
TAPCR 1200-3-7-.07(2)

(end of conditions)